Klamath Network Featured Creature
June 2011

Broad-footed Mole
(Scapanus latimanus)

FIELD NOTES:

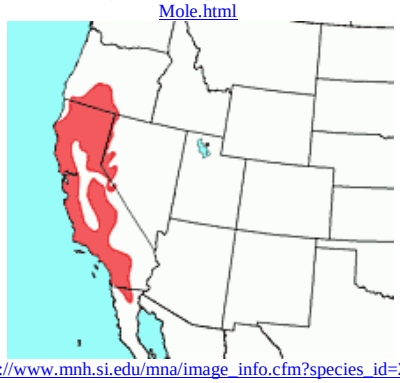
General Description:
The broad-footed mole is a medium sized mole (2 oz, 5-7½ in long with a ¾-1¾ in tail) with dark coppery brown to light silvery gray fur covering a cylindrical body. Individuals in more arid areas are lighter in pelage than those in moister climates. It has short hairs covering almost the whole length of its narrow snout and a short hairy tail, whereas other mole species in the area have hairless tails. If you get close enough to a broad-footed mole to examine its dentition, you would find variances among its unicuspid teeth versus other moles. As its name implies, it has wide forefeet. However, the feet are generally not wider than those found on other mole species. The long, scoop-shaped claws that adorn the feet aid in digging. The mole's minute eyes are barely visible, concealed and protected by the fur that surrounds them.

Reproduction and Development:
Broad-footed moles breed in January or February and produce a yearly litter of 2-5 young in March or April. The young are born in a grass and leaf-lined nest deep in a tunnel. They are weaned after a month and remain in the mother's tunnel system for 3 months before dispersing.

Diet and Feeding:
The broad-footed mole is sensitive to vibrations through the soil. These vibrations alert them to the movement of prey, which they can then quickly locate and devour. The mole enjoys a range of fossorial finds, including earthworms (the favorite), insects, spiders, centipedes, and some plant matter. Broad-footed moles clasp earthworms with their forefeet and chew the worm from one end to the other, not only cleaning dirt off the outside of the worm as they go, but also pushing the mud out of the worm's intestines, thus avoiding slurping it down.


http://ucsantacruz.ucnrs.org/?page_id=1047


http://www.audubonguides.com/species/Mammals/Broad-footed-Mole.html


http://www.mnh.si.edu/mna/image_info.cfm?species_id=296

Distribution and Habitat:
They are found from south-central Oregon to northern Baja California, in Mexico, from lowlands to 9,000'. They prefer moist and fairly rich soils with little vegetation, especially near streams, bogs, and meadows. Their distribution appears to be limited by soil moisture, as they are unable to burrow in arid, baked soils containing few food sources. They avoid heavy clay and stony soils.

More Information:
Verts, B.J., and L. N. Carraway. 2001. *Scapanus latimus*. Mammal Species 666:1-7.

Fossorial Adaptations and Behavior:
Well equipped for a subterranean lifestyle, the mole's broad, clawed forefeet are a notable adaptation of fossorial mammals. The mole's short heavy clavicle helps it muscle away earth as it digs through the soil, one of its many bone adaptations that favors power over speed. Their fur is flexible and velvety, allowing it to move forward or backward with little friction within its tunnels. Solitary and highly territorial, the broad-footed mole is active intermittently day and night year round. After rainfall, the mole is especially active, presumably due to increased prey movement and easier digging through the moist soils. Speeds of a whopping 18 feet per hour have been recorded for the broad-footed mole after rains. They are constantly on patrol and expanding the two types of tunnel systems that they create. One system is temporary and shallow, in order to feed on invertebrate delicacies found just under the surface, appearing as ridges on the ground surface. The other is deeper, for nesting, sleeping, and defense, and appears above ground as mole hills. Although rarely active on the surface, they must be vigilant for owls, their main predator, when above ground.

Ecological Benefits:
Broad-footed moles provide a service by mixing and aerating the soil and may play an important role in soil development.

Where to See It in the Klamath Parks:
Crater Lake, Lava Beds, Lassen Volcanic, and Whiskeytown are all places the broad-footed mole calls home. They may possibly also occur at Redwood.